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Baumgart et al.

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(54) **TEMPERATURE-REGULATING ELEMENT**

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CPC **F28D 15/02** (2013.01); **H01M 10/6556**
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(58) **Field of Classification Search**

CPC H01M 10/617; H01M 10/613; H01M 10/615
See application file for complete search history.

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ABSTRACT

The present invention provides a temperature-regulating element (1) having a thermally conductive surface (3) and a thermally insulating surface (5), said temperature-regulating element comprising a metallic plate (7) having elevations (9), a main body (11) composed of plastic and two connection components (17a, 17b) comprised of plastic. At least one continuous channel (13) for receiving a temperature-regulating medium is formed between the metallic plate (7) and the main body (11), said at least one continuous channel extending from one end face (15a) to an opposite end face (15b) of the main body (11) and being connected to a temperature-regulating medium circuit by the connection components (17a, 17b). The temperature-regulating element (1) is designed such that the main body (11) at least partly surrounds the metallic plate (7). A method for producing a temperature-regulating element, a use of the temperature-regulating element (1) in a lithium-ion battery (101), and a lithium-ion battery (101) comprising the temperature-regulating element (1) are furthermore specified.

14 Claims, 7 Drawing Sheets

